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DOE Meeting on ***BALANCING NATURAL GAS  
SUPPLY AND DEMAND***

**Overview of Natural Gas Market**

**December 19-20, 2005**

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# Session Agenda

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**The NPC, the Study, the Process**

**Study Findings**

**Study Recommendations**

**Recent Events**

**Key Issues**

## Overview of Natural Gas Market

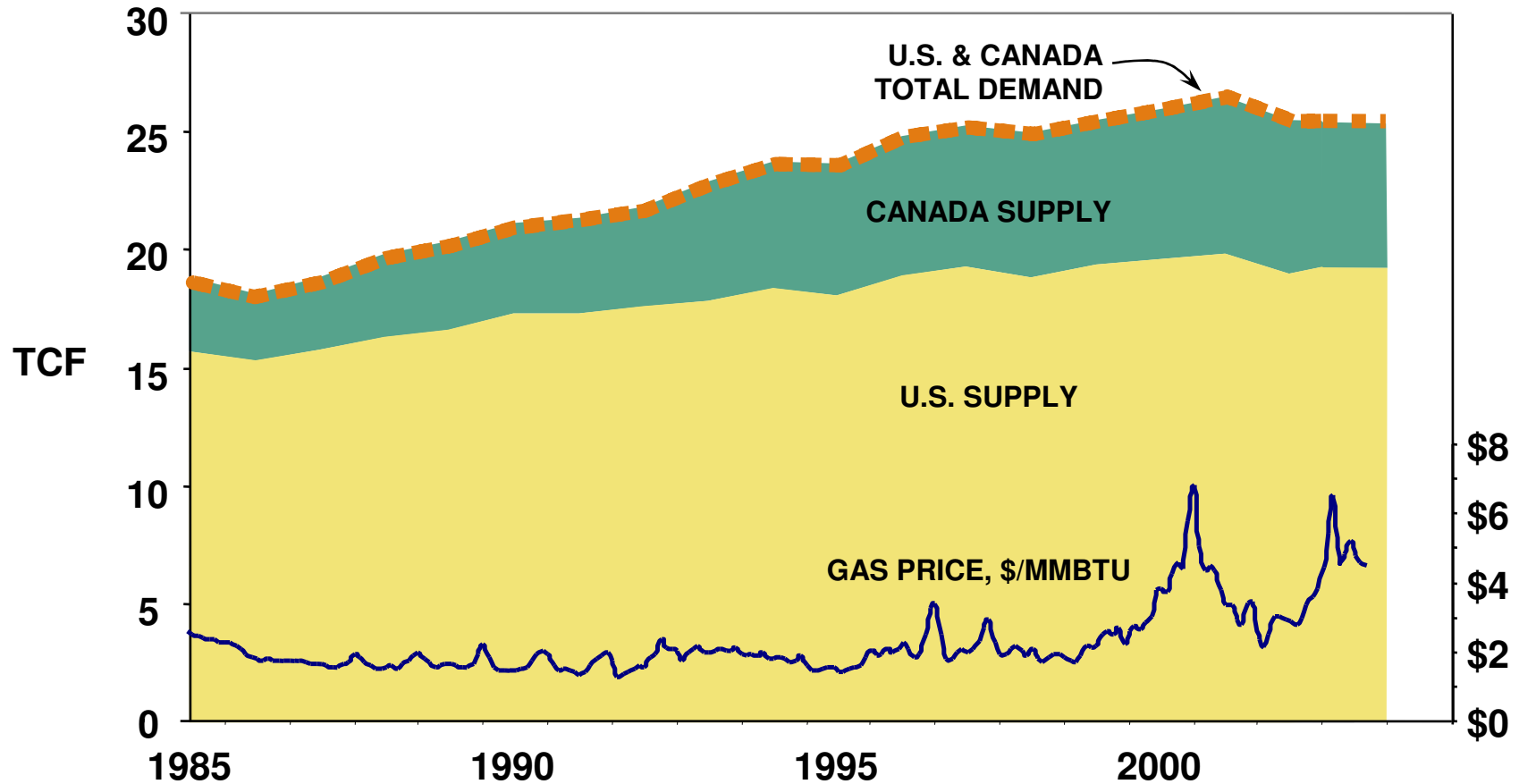
### What is the NPC and Why Did It Do This Study?

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- ◆ The National Petroleum Council is a federally chartered, privately funded council of more than 175 members which advises the Secretary of Energy on issues related to oil and natural gas and the oil and natural gas industries.
- ◆ In March 2002 Spencer Abraham, Secretary of Energy, requested that the Council provide an outlook for the long term sustainability of natural gas supplies and give advice on actions that can be taken by government and industry.
- ◆ The NPC assembled a large and diverse study group from all sectors of the natural gas industry including significant representation and participation by members of the consuming, production and infrastructure sectors as well as representatives of state and national governments.
- ◆ In September 2003 the Natural Petroleum Council submitted its report titled: *Balancing Natural Gas Policy: Fueling the Demands of a Growing Economy* to Secretary Abraham.

## Overview of Natural Gas Market

# Higher Prices Reflect a Fundamental Shift in Supply & Demand



## **NPC Study Approach**

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- ◆ **We must improve from the status quo.**
- ◆ **The current policy direction — unaltered — will likely lead to difficult conditions in the natural gas market, but industries, government, and consumers will react.**
- ◆ **Therefore, this study assumes action beyond the status quo: Arctic pipelines built, substantial LNG imports, success in Lower-48 permitting, increased energy efficiency, fully-compliant coal and renewable generation.**

## The NPC Analyzed Two Base Scenarios Beyond the Status Quo

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### **Reactive Path**

Public policies remain in conflict, encouraging consumption while inhibiting supply ... resulting in higher prices and volatility

### **Balanced Future**

Public policies aligned: alternate fuels and new natural gas supply sources compete to ensure lowest consumer cost

# Findings

"There has been a fundamental shift in the natural gas supply/demand balance that has resulted in higher prices and volatility in recent years. This situation is expected to continue, but can be moderated."

## Demand

"Greater energy efficiency and conservation are vital near-term and long-term mechanisms for moderating price levels and reducing volatility."

"Power generators and industrial consumers are more dependent on gas-fired equipment and less able to respond to higher gas prices by utilizing alternate sources of energy."

"Gas consumption will grow, but such growth will be moderated as the most price-sensitive industries become less competitive, causing some industries and associated jobs to relocate outside North America."

## Supply

"Traditional North American producing areas will provide 75% of long-term U.S. gas needs, but will be unable to meet projected demand."

"Increased access to U.S. resources (excluding designated wilderness areas and national parks) could save consumers \$300 billion in natural gas costs over the next 20 years."

"New, large-scale resources such as LNG and Arctic gas are available and could meet 20-25% of demand, but are higher-cost, have longer lead times, and face major barriers to development."

## Infrastructure

"Pipeline and distribution investments will average \$8 billion/year, with an increasing share required to sustain the reliability of existing infrastructure."

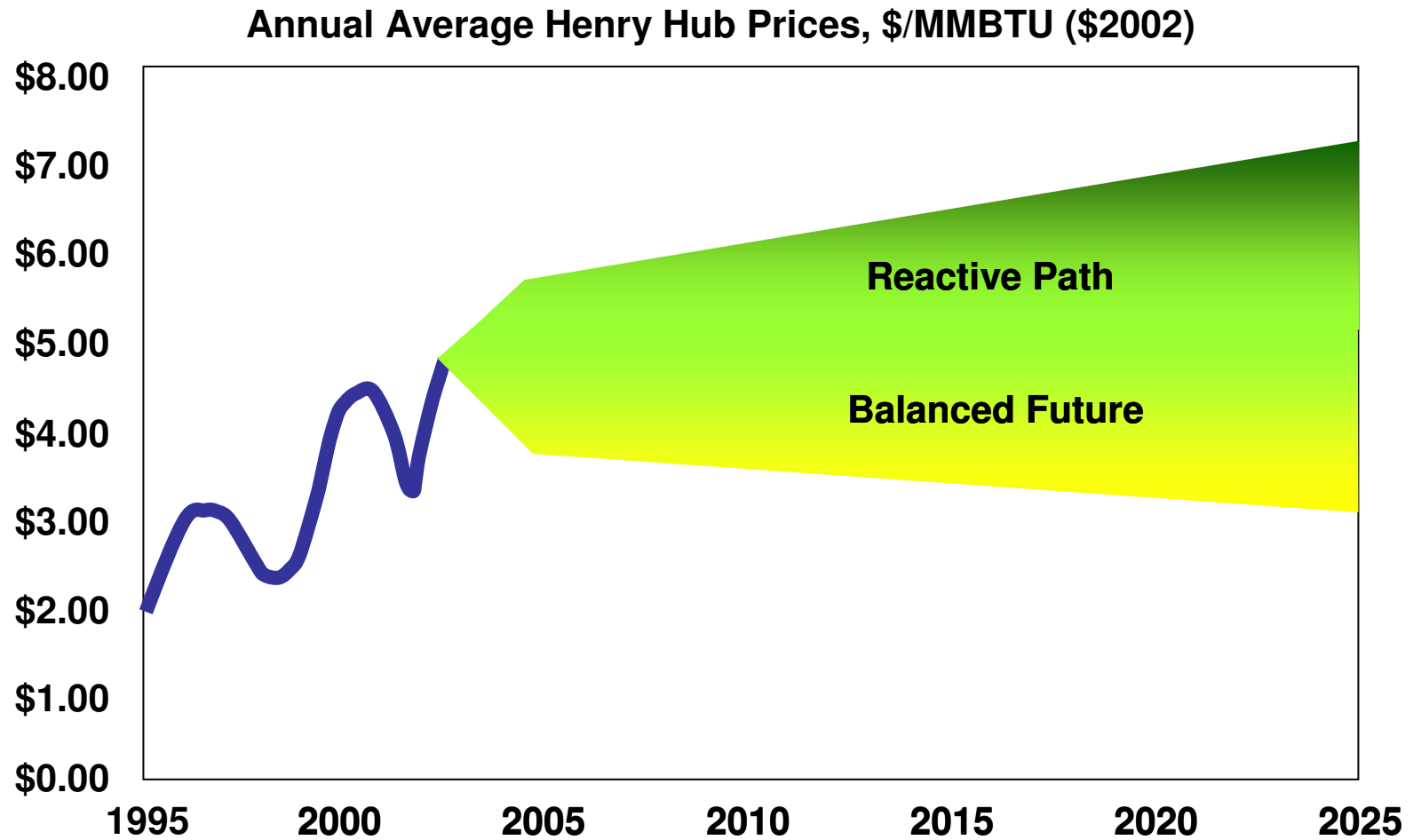
"Regulatory barriers to long-term contracts for transportation and storage impair infrastructure investment."

## Markets

"Price volatility is a fundamental aspect of a free market, reflecting the variable nature of demand and supply; physical and risk management tools allow many market participants to moderate the effects of volatility."

"A balanced future that includes increased energy efficiency, immediate development of new resources, and flexibility in fuel choice, could save \$1 trillion in U.S. natural gas costs over the next 20 years. Public policy must support these objectives."

## Potential Price Range





## The NPC Recommended Action in All These Areas

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**Improve demand  
flexibility & efficiency**

***and***

**Increase supply  
diversity**

***and***

**Sustain and enhance  
infrastructure**

***and***

**Promote efficient  
markets**



**Higher economic  
growth**

**Higher employment**

**Stronger industrial  
activity**

## Overview of Natural Gas Market

# Recommendations

A balanced future that includes increased energy efficiency, immediate development of new resources, and flexibility in fuel choice, could save \$1 trillion in U.S. natural gas costs over the next 20 years. Public policy must support these objectives.

### Demand

#### Improve demand flexibility and efficiency

Encourage increased efficiency and conservation through market-oriented initiatives and consumer education.

Increase industrial and power generation capability to utilize alternate fuels.

### Supply

#### Increase supply diversity

Increase access and reduce permitting impediments to development of Lower-48 natural gas resources.

Enact Enabling Legislation in 2003 for an Alaska gas pipeline.

Process LNG project permit applications within one year.

### Infrastructure

#### Sustain and enhance infrastructure

Provide regulatory certainty by maintaining a consistent cost-recovery and contracting environment and remove regulatory barriers to long-term capacity contracting and cost recovery of collaborative research.

Permit projects within a one-year period utilizing a "Joint Agency Review Process."

### Markets

#### Promote efficiency of markets

Improve transparency of price reporting.

Expand and enhance natural gas market data collection and reporting.

## Recent Events

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- ◆ Continuation of robust economic growth and related growth in electricity demand
- ◆ High world oil prices
- ◆ Significant short term supply disruptions related to hurricane damage
- ◆ High and volatile natural gas prices

## **The NPC Report continues to be a valuable resource**

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- ◆ **The major findings and recommendations of the NPC report remain valid.**
- ◆ **Many of the policy recommendations in the report have been accomplished and their positive effects are starting to be felt.**
- ◆ **Differences in variables outside the scope of the study - such as levels of economic activity and world oil prices - account for most of the differences between actual and projected outcomes.**
- ◆ **Those differences and the resulting impacts underscore the need for continued actions to implement the study recommendations.**

## Key Issues

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### Demand

- ◆ Improve fuel use flexibility.
- ◆ Encourage increased end use efficiency.

### Supply

- ◆ Continue to improve access and remove permitting impediments.

### Infrastructure

- ◆ Increase regulatory certainty and remove barriers to long term contract support for infrastructure projects.